

Title: The practical management of emergencies in primary care: Taking simulation out of the classroom and into real life environments

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ABSTRACT

Life threatening emergencies in the community are relatively infrequent and therefore provide a challenge for doctors in keeping up-to-date and maintaining confidence. Training in managing emergencies typically takes place through role play and classroom based simulation. In this project, we took simulation out of the classroom and into community environments where emergencies actually occur creating 'real-life' scenarios. These included the practical management of meningitis, anaphylaxis, hypoglycaemia, convulsions and cardiac arrest. Doctors had to find and utilize the equipment in their surgeries and were asked to physically draw up the appropriate medication. The simulation training was led by a GP and a Consultant in Intensive Care Medicine. Participants' confidence in managing emergencies significantly increased after the workshops. Qualitative feedback illustrated the need for more simulation based learning: "I hope this can be done regularly as it will make a huge difference to patient care", "Excellent - life like to make more memorable", "Good to use the actual surgery equipment". Many of the participants knew the theory of what to do but lacked the practical skills to efficiently manage emergency scenarios. Training doctors through simulation needs to be taken out of the classroom and into real life environments. This is particularly important for 'time critical illnesses' where delays can have a direct impact on morbidity and mortality.

INTRODUCTION

General Practitioners (GPs) have a responsibility to provide prompt and effective care in an emergency and GPs in the UK are required to undertake annual BLS training. However, most emergencies are peri-arrest and this is an area where GPs lack confidence (1). This may be because life threatening emergencies in the community are relatively infrequent and therefore provide a challenge for doctors in keeping up-to-date. The aim of this project was to upskill primary care clinicians in managing emergencies that could occur in GP surgeries.

Classroom based simulation has a track record for teaching and often used for BLS courses. However, clinicians need to be able to use their own equipment and medication, and be confident managing emergencies within their surgeries. High fidelity simulation based training programmes for managing emergencies have been successfully used in hospital settings (2) and have been shown to improve knowledge, including emergency cardio-pulmonary resuscitation (CPR) scenarios (3,4). To the best of our knowledge there is no research investigating its value in primary care settings. This highly innovative project brought simulation out of the classroom and into community environments where emergencies actually occur creating 'real-life' scenarios.

METHOD

PARTICIPANTS

10 workshops were held in GP surgeries across Dorset and attended by 71 primary care staff (59 doctors and 11 practice nurses and 1 HCA).

SIMULATION BASED WORKSHOPS

Simulation based workshops covering the more commonly encountered emergencies were led by 1 GP and 1 Consultant in Intensive Care Medicine. Consultants are all qualified Advanced Life Support and Advanced Paediatric Life Support instructors. Scenarios included the practical management of meningitis, anaphylaxis, hypoglycaemia, convulsions, choking, croup, asthma and cardiac arrest. The novel aspect of this work was that participants had to find and utilize equipment in their own doctor's bags and surgeries. They were also asked to physically draw up the appropriate medication and simulate administering it (see Figure 1).

Figure 1: Managing emergencies in GP surgeries

Insert figure 1 here

RESULTS

PARTICIPANTS' CONFIDENCE IN MANAGING EMERGENCIES IN THE COMMUNITY

Participants were asked "How confident are you in the practical management of emergencies within your practice?" and asked to rate their response on a 9 point Likert scale: 1 (not confident) - 9 (very confident). Participants felt significantly more confident in managing medical emergencies after attending the workshops (mean rating = 7.5) compared to before (mean rating = 4.7), unpaired, unequal variance t test, $P < 0.01$.

EXAMPLES OF LEARNING NEEDS

We observed the same pattern repeatedly, where participants knew 'in theory' what to do but were unable to quickly and safely demonstrate competence in the practical aspects of the scenarios. For example, experienced doctors struggled to draw up lifesaving medication such as benzyl penicillin for meningococcal meningitis and adrenaline for anaphylaxis. Several lacked confidence in measurement of blood glucose levels (using BM machines) and were unsure how to turn on the oxygen cylinders in their surgeries. Participants did not consistently use a structured ABC approach when assessing a seriously ill or peri-arrest patient.

FEEDBACK

Participants highly valued the education provided in the simulation based workshops. 97% gave the highest rating to the questions 'how relevant was the teaching to your needs?' ('very relevant') and 'how would you rate the teaching within the scenarios?' ('very good'). Participants were also asked to rate the education event overall, and 100% gave it the highest rating ('very good'). In qualitative feedback, participants generated 118 comments on what they found useful. The majority (48% comments) were on the value of the practical aspect of the teaching.

"Going through the actual actions such as drawing up correct drug doses and using the oxygen cylinder"

"Practically handling emergency equipment"

"Actually drawing up doses"

"Epipen use"

"The need for knowing how to use our own equipment"

"actually using equipment kept at the practice, identifying where things are kept and practical advice e.g. giving an epipen, drawing up meds".

Participants also valued the clinical teaching and scenario based approach (39% comments).

“Remember glucose”

“ABCD and AVPU assessments”

“Emergency section in BNF”

“Really useful to use scenarios”

Participants also commented on the importance of a supportive environment and the overall value of the workshop (14% comments).

“Non-threatening and very useful session”

“Recognition that is rare and hard to know it all”

“This was brilliant”

“I learnt lots and everything was useful”

Participants were also asked ‘What was less useful?’ and ‘Any other comments’. There was no feedback on ‘What was less useful?’ and additional comments focused on the need for further ‘real-life’ simulation training for managing emergencies in the community.

“I hope this can be done regularly as it will make a huge difference to patient care”

“Disseminate to all GPs and practice nurses”

“All practices should avail themselves of this teaching- we shy away from these scenarios but we need to be as confident as possible”

DISCUSSION

Our results clearly indicate that this is an area where primary care staff need more training and opportunities to gain practical skills and confidence. Most participants knew the theory of what to do in emergencies but lacked the practical skills and confidence to quickly and efficiently manage scenarios. This included both very experienced GPs and younger GPs who had recently undertaken hospital rotations (including A&E). Participants highly valued the practical, simulation based aspect of the teaching. Training needs to be taken out of the classroom and into real-life environments. This is particularly important for time critical illnesses where delays can have a direct impact on morbidity and mortality. We believe that there should be more of a focus on how to manage patients in the peri-arrest phase to avoid cardiac arrest rather than the current focus on BLS training alone.

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COMPETING INTERESTS

None

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